momentum and particle inertia cause the airborne contaminants to impact on the adhesive media 20. Thereafter, the air flows around the microscope slide 16, as generally indicated by the arrows designated 88. The air flow then enters an exist passage 90 before flowing into a vacuum line 92 and through the outlet 74 to the vacuum source 78. The exit passage 90 is located in the center of the circular depression 42 and is cross drilled to the vacuum line 92.

In the claims:

1. (Amended) An airborne particle impaction sampler, comprising:

a base;

a microscope slide disposed on said base;

an adhesive media located on said microscope slide to assist in adhering airborne particles on said microscope slide;

a top cap secured to said base, said top cap having an inlet opening formed therethrough, said inlet opening being configured as a slit;

said inlet opening having an outer venturi section and an inner laminar section such that air entering the sampler impacts said adhesive media.

2. (Amended) The sampler of claim 1, wherein said inlet opening has a pair of generally straight opposing side portions and a pair or arcuate end portions.

3. (Original) The sampler of claim 2, wherein said venturi section has a pair of oval sides that extend generally inward from a respective one of said arcuate end portions.

4. (Original) The sampler of claim 3, wherein said venturi section has a pair of opposing side surfaces that converge towards one another.

5. (Original) The sampler of claim 1, wherein said top cap telescopically fits over said base.

6. (Original) The sampler of claim 1, wherein said base has a groove formed in its outer surface and an o-ring disposed in said groove to prevent air from leaking into said sampler when said top cap is secured to said base.

7. (Original) The sampler of claim 1, further comprising:

a vacuum source attached to the sampler for drawing air therein.

8. (Twice Amended) A method of gathering airborne particles in an air [slit impaction] sampler, comprising:

providing a microscope slide;

preparing said microscope slide with an adhesive media;

loading said slide into [a base portion of] the sampler;

assembling a top portion of the sampler to [said] a base portion;

connecting a vacuum source to an outlet opening of the sampler;

drawing air into an inlet opening formed in said top portion of the sampler, said inlet opening being substantially smaller than an upper surface of said top portion;

accelerating air after it enters said inlet opening; and

directing the air such that it impacts said adhesive media in a perpendicular direction by passing the air through a generally laminar portion of said inlet opening.

9. (Original) The method of claim 8, wherein said adhesive media is applied to a middle two-thirds portion of said microscope slide.

10. (Original) The method of claim 8, further comprising:

precalibrating said vacuum source.

11. (Original) The method of claim 10, further comprising:

calibrating said vacuum source on-line during the gathering of airborne particles.

Claims 12 – 19 (cancelled)

20. (Amended) An airborne particle impaction sampler comprising:

a housing;

a slide disposed within said housing;

a coating disposed on said slide to assist in adhering airborne particles on said slide;

a inlet formed in said housing in proximity to said slide;

a passageway in communication with said inlet to convey air entering the sampler to said slide, said passageway having an venturi section located adjacent said inlet and a laminar section;

said passageway having a non-circular opening adjacent said slide to direct the air at the slide in a generally elongated fashion.

21. (New) The sampler of claim 20, wherein said laminar section is located adjacent said venturi section.

22. (New) A method of gathering airborne particles into an impaction sampler comprising:

providing a housing;

locating a microscope slide in said housing, said microscope slide having an adhesive media applied thereon;

drawing air through a small opening formed in said housing and into a passage located adjacent said microscope slide;

accelerating said drawn air in first portion of said passage after it has passed through said opening;

passing said accelerated air from said first portion to a second portion, said second portion having a smaller diameter than said first portion; said second portion having an opening adjacent said microscope slide that is non-circular in shape.

23. (New) The method of claim 22 wherein said step of drawing air further comprises connecting a vacuum source to an outlet opening of the sampler.

24. (New) The method of claim 22, wherein said opening is configured in the shape of a slit.

25. (New) The method of said passage of claim 22 wherein said first portion is a venturi portion and said second portion of said passage is a laminar portion.

26. (New) The method of claim 22, further comprising:

directing the air such that it impacts said adhesive media in a substantially perpendicular direction.

27. (New) A bioaerosol impaction sampling device, comprising:

a housing including a first portion and a second portion which are in releasable engagement with each other;

a slide disposed in said housing and in communication with an inlet passageway formed in said housing;

a recessed portion being formed in said housing and sized to receive at least a portion of said slide;

said housing having a bore formed adjacent to said recessed portion, said bore being sized such that air can flow around said microscopic slide and outlet opening;

a vacuum source in communication with said outlet opening; and

said inlet passageway having an outer inlet opening and an inner inlet opening, wherein said outer inlet opening is larger than said inner inlet opening.

28. (New) The device of claim 27, wherein said first portion is a top cap and said second portion is a base.

29. (New) The device of claim 28, wherein said inlet passageway is formed in said top cap.

30. (New) The device of claim 28, wherein said recess is formed in said base.

31. (New) The device of claim 27, wherein said inner inlet opening is configured as a slit.

32. (New) The device of claim 31, wherein said slit is generally rectangular.

33. (New) The device of claim 23, wherein said inlet passageway has a venturi portion.

34. (New) The device of claim 27 wherein said inlet passageway has a laminar portion and a venturi portion with said laminar portion being located adjacent said inner inlet opening.

35. (New) An impaction air sampler, comprising:

a housing having an upper portion and a lower portion;

a retaining mechanism formed in said housing for holding a slide placed therein;

an inlet passageway being formed in said housing adjacent said slide;

said housing having a bore, which is sized to allow air to flow around said slide; and

an outlet passage in communication with said bore at one end and a vacuum source at another end.

36. (New) The sampler of claim 35, wherein said retaining mechanism is a recess.

37. (New) The sampler of claim 35, wherein said inlet passageway is formed in said upper housing.

38. (New) The sampler of claim 35, wherein said inlet passageway has a venturi portion.

39. (New) The sampler of claim 35, wherein said inlet passageway has a laminar portion.

40. (New) The sampler of claim 39, wherein said inlet passageway has a venturi portion with said laminar portion being located adjacent said slide.

41. (New) The sampler of claim 35, wherein said inlet passageway has an inner inlet opening that is configured as a slit.

42. (New) The sampler of claim 41, wherein said slit has a generally rectangular shape.